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ABSTRACT

Two papers on copyright and privacy considerations of international information transfer were presented at the 1982 International Federation of Library Associations (IFLA) conference. In "Findings of the IFLA International Study on the Copyright of Bibliographic Records in Machine-Readable Form," Dennis D. McDonald, Eleanor Jo Rodger, and Jeffrey L. Squires (United States) describe the methodology and results of a King Research study which found that: (1) present copyright laws are not adequate to govern the international exchange of machine-readable bibliographic data; (2) the most feasible methods of governing such exchanges currently are detailed bilateral exchange agreements specifying the rights and responsibilities of exchange partners; (3) economic uncertainties and producers' continuing desire to control the redistribution of their records may lead to restrictions on international exchange; and (4) organizations such as IFLA must develop and promote mechanisms for the open discussion and analysis of economic, financial, and political differences. "Implications of Transborder Data Flows (TDF) to Library Networks" by Hugh P. Donaghue (United States) reviews concerns about the electronic movement of data across national borders for storage and/or processing by a computer. Viewpoints from France, Brazil, multinational corporations, and the international library community are briefly presented. (Author/ESR)

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MANAGEMENT AND TECHNOLOGY DIVISION

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Findings of the IFLA International Study on the Copyright of Bibliographic Records in Machine-Readable Form

by

Dennis D. MCDONALD
Vice President
Eleanor Jo RODGER
Research Associate
King Research, Inc.
Rockville, Maryland, USA

and

Jeffrey L. SQUIRES
Partner
Jaffe, Squires & Foote
Washington, D.C., USA

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76

Abstract

Findings of the IFLA International Study on the Copyright of Bibliographic Records in Machine-Readable Form

With funding from the Council on Library Resources (CLR), the International Federation of Library Associations and Institutions (IFLA) contracted with King Research to study the implications of copyright on the exchange of bibliographic data in machine-readable form among national bibliographic agencies. The study found the following. First, copyright law at the present time is not adequate to govern the international exchange of machine-readable bibliographic data. Second, the most feasible methods at the present time for governing such exchanges are detailed bilateral exchange agreements which specify the rights and responsibilities of exchange partners. Third, economic uncertainties concerning the production and exchange of machine-readable bibliographic data, as well as producers' continuing desire to control the re-distribution of their records, may lead to restrictions on international exchange. Fourth, organizations such as IFLA must develop and promote mechanisms where economic, financial, and political differences can be openly discussed and analyzed.

Introduction

In this study we examined copyright law and its implications for controlling the international exchange of bibliographic data in machine-readable form among national bibliographic agencies. We found that copyright law at the present time does not provide a consistent and universal control mechanism to govern the exchange of machine-readable bibliographic data by these agencies. There are several reasons for this. First, not all national bibliographic agencies claim copyright ownership for the machine-readable bibliographic records which they produce. Second, we found that several shortcomings exist to the direct application of copyright law to the primarily non-commercial sharing of data among the national bibliographic agencies. These shortcomings are due both to the nature of the activities engaged in by the national bibliographic agencies as well as to uncertainties concerning the applicability of copyright law, both nationally and internationally, to individual computerized bibliographic records. We concluded that the most feasible mechanisms which exist at the present time for governing the international exchange of machine readable bibliographic data among national bibliographic agencies are bilateral exchange agreements which describe in detail the types of uses which the parties to exchange are allowed to make of the exchanged data. Furthermore, we recommended that exchange partners not focus exclusively on copyright concerns but also on the economic and policy implications of their provision of machine-readable data to other organizations. Several of the recommendations made as a result of this study (discussed later in this paper) reflect this need to better understand the economic and policy implications of international data exchange.

Methods

This study, funded by the International Federation of Library Associations and Institutions (IFLA) through a grant from the Council on Library Resources, had three components. The first was a survey of national bibliographic agencies. This survey, conducted by means of a mail questionnaire, resulted in twenty-one questionnaires being received by King Research in time for inclusion in the final report. The questionnaire, printed in English and accompanied by a letter of transmittal supplied by IFLA headquarters, addressed the following topics associated with bibliographic records in machine-readable form:

1. Production of bibliographic records.
2. Receipt of bibliographic records.
3. Distribution of bibliographic records.
4. Computerized on-line access to bibliographic records.
5. Characteristics of exchange agreements.
6. Copyright.
7. Mechanisms for controlling the international distribution and use of bibliographic records.

The second component of the study was a series of personal and telephone interviews with twenty individuals in North America representing a variety of interests including both government and non-government producers and users of bibliographic records. These interviews covered a variety of topics, including possible future developments in the production, distribution, and use of bibliographic records in machine-readable form.

The third component of the study was a review of copyright law and its potential relevance to the control of international exchange of bibliographic records in machine-readable form.

These three components were supplemented by a literature review of related documents, including documents related to copyright (1,2,3,4,5), library networking (6,7,8,9,10,11), international issues (12,13,14,15,16,17), and databases (18,19,20,21,22).

The draft of the final report was submitted to IFLA in January 1982, and the final report, with revisions, was submitted in May, 1982 (23).

Discussion of Survey Findings

Approximately 35 national libraries or national bibliographic agencies world-wide were identified by IFLA as being very likely to currently have or to have plans for the automation of bibliographic records. Twenty-one responses (24) were received in time to be tabulated. While the central concern of the study was copyright and the exchange of machine-readable bibliographic records among the national bibliographic agencies themselves, several related topics, such as distribution of records within the originating countries themselves, were also considered.

Almost three-fourths of the 1.5 million machine-readable records to be added by the 21 responding agencies, 18 of which said they intended to produce machine-readable bibliographic records in 1981, were accounted for by five countries: Denmark, Sweden, South Africa, the United Kingdom, and the United States. Thus, the bulk of bibliographic record production is accounted for by a relatively small number of countries, suggesting that the economic interests of countries involved in exchange may also differ substantially.

Only five countries (Singapore, Denmark, Malaysia, United States, South Africa) base at least 22 percent of their records to be added in 1981 at least partially on machine-readable records obtained from other organizations. Altogether, these agencies account for about half of the machine-readable records to be added in 1981, indicating, at least numerically, a high reliance upon machine-readable data for cataloging purposes.

Only nine agencies actually claim copyright protection for their machine-readable records. Eight agencies report that neither computerized databases nor computer programs are protected by their nation's copyright laws. Only two agencies reported that their countries discourage, restrict, or control distribution of machine-readable bibliographic records across national boundaries.

We divided bibliographic data exchange into two categories: exchange between the agency and other organizations within its own country, and exchange with organizations outside its country.

Only four agencies (U.K., U.S., Denmark, South Africa) reported they received machine-readable bibliographic records from organizations within their country. The United Kingdom reported that all of the records which

it received from its 48 domestic contributors were covered by copyright. The United States reported that none of the records received from its 18 domestic contributors were covered by copyright.

Eight agencies reported that they distributed machine-readable bibliographic records to organizations within their countries; the majority of the U.K.'s domestic recipients (23 out of 30) were organizations funded by local governments. About half (21 out of 43) of the United States' domestic recipients were commercial, for-profit, or private sector organizations, while 19 were networks, utilities, or academic, public, or state libraries. Only four of these eight agencies have formal exchange agreements with the domestic recipients of their records.

Six agencies report that organizations within their countries provide on-line access to their records. The United Kingdom (which claims copyright protection for its bibliographic records) is the only country whose national bibliographic agency derives income or revenue from the on-line service provided by these other domestic organizations.

We turn now to exchanges with organizations outside the national bibliographic agencies' own national boundaries. We found that ten agencies in 1980 (about half of those responding) received machine-readable bibliographic records from organizations outside their own country; these ten agencies include Canada, U.S., Denmark, France, South Africa, U.K., Japan, Malaysia, Singapore and Thailand. At least eight of these ten agencies receive bibliographic records from at least one foreign organization which claims copyright protection for its bibliographic records.

Seven responding agencies (U.S., Thailand, Philippines, U.K., France, Denmark, Canada) distribute records in machine-readable form to organizations outside their country. At least three of these countries (Canada, U.K., U.S.) report that these foreign exchange partners provide on-line access to their records. None report deriving any money from participation in such arrangements. Ten agencies report they have formal exchange agreements with foreign organizations. Six agencies report having exchange agreements which cover both the receipt as well as distribution of data (France, U.S., Denmark, Thailand, U.K., Canada). Five have agreements which cover only the distribution of data (France, U.S., Thailand, U.K., Canada). Seven have agreements which cover only the receipt of data (Denmark, Thailand, Sweden, South Africa, Singapore, Malaysia, Canada). (Due to the large number of agreements which cover both distribution and receipt, it is not possible to estimate how many unique exchange partners and/or exchange agreements exist, since several countries may distribute and receive records with the same foreign organization.)

Of the total of 21 responding agencies, eleven provide computerized on-line access to their bibliographic records. Only four of these eleven agencies report that they provided on-line access to individuals or organizations outside their country. Only two of the eleven derive any income from this service.

When asked how the machine-readable bibliographic records they obtained from other organizations were used, three uses were mentioned most frequently: searching, examining, or viewing individual records or data elements without copying, modifying, or duplicating them; changing or altering the contents of one or more of the data elements in the bibliographic record; and, preparing a paper or microform copy of the machine-readable bibliographic records. Least frequently mentioned was the making of exact copies.

When asked more specifically to identify the type of application made of the information obtained from the machine-readable bibliographic records, two applications were mentioned most frequently: used to search for cataloging data; and, used to help produce a database which is available for on-line searching or examination.

Respondents were also asked to rank a variety of "control mechanisms" which were possibly relevant to controlling the international exchange of bibliographic records. The following mechanisms received the strongest support: changes in national copyright laws; bilateral exchange agreements; and, electronic means of controlling distribution.

Finally, agencies were asked to indicate how often eight specific components were included in the formal exchange agreements they had entered into with organizations to which they currently supply machine-readable bibliographic records. Currently, the component which occurs most frequently in such exchange agreements is that records must be provided in MARC/UNIMARC format. Agencies also indicated the exchange agreement components most frequently mentioned were (1) the receiving organization agrees not to produce a competing product or service, and (2) the receiving organization may not copyright a product or service based on the supplied machine-readable bibliographic records.

The picture which these data provide is one of a complex international exchange system, governed by both formal and informal exchange agreements, in which producing agencies are increasingly concerned with questions of controlling the use and/or modification of their records. The degree to which copyright protection is sought varies substantially from country to country, even among the major producers. Few organizations derive any significant income from the sale or distribution of their records. Recipient organizations use records in not-unexpected ways, either as part of their ongoing cataloging or library services, or for inclusion in their distribution of records in paper, microform, or computerized form. Despite the wide acceptance of standardization, the degree of record modification appears to be relatively high.

We conclude that use of the machine-readable records by the national agencies can be characterized as the operation and expansion of traditional library bibliographic sharing programs, facilitated now by computer technology. Without addressing the question of economic viability, it would appear that the international exchange partnerships operate successfully.

The concern about record use and modification which was one of the driving forces behind generating this study may not be caused, we suspect, by the activities of the national agencies themselves. Instead (drawing upon our

interview findings) concern about record use and modification derives from concern about the activities of third-party organizations such as networks, consortia, and commercial organizations. Agencies regularly modify (to varying degrees) the records they receive before including them in their own bibliographic systems. Contributing organizations cannot directly control how third party organizations may use their records. We thus draw the following conclusions. First, a standardized mechanism such as a universal exchange agreement is neither feasible nor desirable. Second, if agencies' concern about modification continues to increase, if demands that producing agencies share in proceeds from sale to or by third parties continue to increase, and if universal applicability and/or use of copyright continue to be an uncertainty (as we expect to be the case for the foreseeable future), then restrictions may develop concerning the sharing of bibliographic data on an international basis. These restrictions may threaten or at least delay the attainment of universal bibliographic control unless steps are taken now to promote a balancing of the rights of producers and users of bibliographic data.

We freely admit that this is primarily an economic interpretation of the problems which arise when computerized data are shared and uncertainties or unevenness exist regarding copyright. It does not fully take into account the "moral rights" basis for copyright which is felt more strongly by European producers, for example. Nevertheless, the economic uncertainties which have arisen may very well overshadow the moral rights considerations if producing organizations do not feel they are receiving a "fair share" of revenues generated from data they originally produced. If such concerns are not assuaged, then there may be cause for concern about the future international exchange of bibliographic data under current arrangements.

Discussion of Interview Findings

Nineteen individuals were interviewed concerning present and future developments in the production, distribution, and use of bibliographic information. These individuals were selected to represent a variety of different sectors of the information community (25). While the interviews did focus on the international exchange of bibliographic data among the national bibliographic agencies, the respondents were encouraged to speculate on data exchange issues which were directly relevant to them or which were likely to become important in the future.

One of the issues frequently mentioned as a problem area in discussions of the sharing of bibliographic data is the relationship of record ownership to record modification. This issue was addressed in the interviews. Does claiming ownership give the owner the right to prohibit record modification by users? At what point are modifications significant enough to call the modified record a new record and therefore to allow the modifying agency the right to claim ownership, and, who cares about this issue and why?

Little concern was voiced by interview respondents over the issue of changes which might be made in bibliographic records by users of a bibliographic data base. Participants in cooperative data bases stressed the need to have their original records remain unmodified in the master file to insure their

usefulness to the contributing library. At least one for-profit data base representative expressed a similar point of view. As long as the fee for using the record was paid, changes in the record were not of concern to the originating company.

Many bibliographic data bases have contractual agreements with their users prohibiting sale of data from the data base to third parties. The issue of how much modification of the record makes the new modified product the possession of the modifier seems not to have been settled definitively. Adding value to an existing record through reformatting or adding or modifying its content appears to make it subject to copyright by the agency adding the value under United States law. An example of such a case is the private press retrospective conversion of Library of Congress pre MARC catalog records into MARC format. Their product is covered by copyright, even though the source catalog records are not.

The costs of developing and distributing bibliographic records are borne by the agency or agencies doing that work. Either these costs must be covered by a subsidy of some kind, such as tax support, or they must be recovered by charging fees. In either case, the producing and distributing agency or agencies must receive returns on its investment which are considered satisfactory or it cannot long remain a producer or distributor of such information. Effective exchange agreements between agencies functioning as producers or distributors are viewed as essential for staying in business. A nonprofit data base may need only to meet operating expenses and development costs, i.e., to break even, in order to feel it has received "adequate returns" on its investment.

Agencies of each of these types can and do enter into contractual agreements specifying the responsibilities of all parties in terms of the generation, use, and distribution of the products of the bibliographic data bases. Such contracts specify ways investors receive appropriate returns and users receive appropriate benefits. No single set of benefits and recovered investment costs is appropriate for all such contracts, because the objectives of the parties differ; hence, development of a standard contract is not viewed as a satisfactory solution.

One concern which surfaced in the context of this issue is who should pay for access to and use of bibliographic data bases and how. The generation of bibliographic records by some agencies is subsidized by public funds, almost always because the producing institution is at least partially supported by such funds. The argument has been made that the subsidization could be more equitably distributed by making it available to users of the data than to its generators; the actual mechanism for accomplishing this is not clear, however.

Distinctions exist between publically supported generators of bibliographic data and commercial generators of such data. Both must recover costs appropriate to their objectives, and both must provide benefits to users within the confines of arrangements which ensure that this will happen. Common arrangements are contracts or exchange agreements which cover selling, leasing, or renting access to the bibliographic data. Various fee structures

are employed, each presumably reflecting the development, maintenance, and distribution costs incurred by the data base owners. No one fee structure is appropriate for all situations.

Bibliographic data bases are intellectual property and are therefore entitled to some form of protection. Individuals interviewed in this study were asked to share their insights and concerns about which components of such data bases should be protected, what would be the most effective point of intervention in the creation, distribution and use cycle to ensure such protection, and what the trouble points in current protection systems are.

Some interview respondents felt that individual records on bibliographic data bases should be protected. The implementation of such a policy might in practice require the payment of royalties to the contributor each time it was used. What constitutes a "use" would need to be carefully spelled out. For a data base system whose primary service was the provision of hard copy, either of individual records or of bibliographies or some other arrangement of the data, use might be easily defined. For a data base service offering extensive search options making it useful to reference librarians, individual record use might be very hard to monitor, particularly if it consisted mainly in viewing the data on a screen. Even though the display of an individual record may be monitored by machine, how the information communicated by that display is actually used and applied cannot be realistically monitored on a real-time basis. Such a record-by-record monitoring is technically feasible; however, the question remains as to whether the associated expenses of software development, computer time, and telecommunications charges would be worth the effort. If copyright law provides the "brackets" which define an intellectual creation which is then subject to contractual arrangements, as was suggested by a number of persons interviewed, the question is then whether or not a single bibliographic record can be covered by copyright. The rationale for a negative response to this question is that bibliographic records are the products of catalogers following a universally available set of rules, not unique intellectual creations.

There were no questions raised as to the copyrightability of compilations of such records, or of the software regulating access to the data bases.

According to the interviewees, the appropriate point of intervention to provide protection for bibliographic data bases, as well as the level of that protection, varies with the objective of the data base and the needs it is designed to serve. Uses made of bibliographic data bases include the provision of cataloging information and cards, title and author verification and location information for interlibrary loans, as a resource for reference service, for acquisitions and information, for subject searches, for the generation of bibliographies, and for collection analysis. (Our survey of national bibliographic agencies covered the frequency with which such uses are made.)

"Illegal" uses of bibliographic data bases seem rare, and consist primarily of users pulling off subsets of bibliographic data which they maintain as personal information systems. Under some contractual agreements, however,

this would constitute misuse only if such a private file were sold to a third party. Such a use may be the subject of a restrictive clause in an exchange agreement.

Almost all persons interviewed commented on one or more changes which they saw as taking place within the next five to ten years which might affect the generation and/or distribution of bibliographic data in machine-readable form. Most persons felt comfortable speculating about the changes, but not about trying to forecast the direct effect of such changes on the generation or distribution of bibliographic data, particularly internationally. What follows, therefore, is a list of areas of change, each followed by brief statements describing a change foreseen by interview respondents in that area.

Concerning financial changes, the costs of creating and maintaining conventional card catalogs is becoming increasingly burdensome and is forcing increasing automation. Financial and political pressures may force publicly supported institutions to attempt to recover costs, such as cataloging costs, from users or other sources. Fewer dollars will be available for tax supported institutions, resulting in increased cooperation. And, as the world becomes more complex, there will be increased economic incentives to have more information available faster.

Technologically, the advent of the optical disc as a medium of storage may change large data bases as they now exist in terms of how they are generated, distributed, and used; it may become possible to get more data into machine-readable form more cheaply. Also, the greater availability of personal computers will have many ramifications for information systems. More power will be given to the end users of the systems, and there will be an increasing mass market for information. However, information, including meta-information (information about information), may become less available to people or countries without the human and financial capital to participate in technologically sophisticated information systems. Finally, a different catalog format may be appropriate when most records are machine-readable. Presently the format which was created for manual systems has been converted to machine-readable form, but a whole new format may become more appropriate.

Organizationally, the role of information organizers and providers may change with advent of personal computers with capability of doing much on-line searching presently done by libraries and other information services. Publishers will increase the amount of bibliographic information they generate, and there will be an increased number of end user-oriented information services.

Legal changes will <u>follow</u> technological changes. Concerning international bibliographic exchanges, there will be increased attention by national governments to issues of trans-border data flow. National bibliographic agencies may be subject to increased numbers of restrictions based on developing national policies.

Finally, one objective of the interviews was to determine the perceptions of a wide variety of persons about how major a problem the legal protection of bibliographic data bases really is.

By and large, persons affiliated with libraries did not feel there were major problems concerning the protection of bibliographic records in machine-readable form which were not now presently well handled by a variety of contractual relationships.

Viewpoints stated by persons in other sectors of the information community expressed a variety of concerns about the significance of the problem including the following:

- It is desirable to develop mechanisms for dealing with bibliographic data protection now because the existence of such mechanisms may prove useful when full text delivery becomes viable.

- In the context of trans-border data flow issues, the international exchange of bibliographic data is a minute portion of the concern being addressed but will be affected by the decisions made regarding, for example, the international exchange of socio-economic data.

- Nevertheless, information is becoming an increasingly valuable international commodity. All 'subset' issues are, therefore, important, including the control of bibliographic data.

Discussion of Legal Issues

The literature about legal protection for computer data bases and programs is vast and growing and treats numerous complexities of law with great and often repetitive detail. Much of this literature has little bearing on current practical problems of ownership and distribution of computerized stores of information. We shall here sacrifice much detail for the sake of conciseness and, hopefully, understanding.

Data bases are compilations of large amounts of discrete information about selected topics, organized to allow those who wish access to certain information to readily identify that information which might be useful. Data bases of bibliographic information have traditionally been published in union catalogues, which users consult to identify monographs or articles by subject matter, title or author. Legal control over such masses of information has typically been a relatively simple matter. Publishers of these volumes could claim copyrights in their books and there was little dispute over their entitlement to prevent others from duplicating these volumes.

It is basic, and must be understood, that copyright provides no rights against reproduction of the discrete facts contained in the individual records compiled in a bibliographic data base such as a MARC system. Copyright protects only against the unauthorized reproduction of a particular organization of the independent bits of information contained in the entire compilation which was in some sense "originated" or "created" by the person responsible for producing the compilation. The limited nature of protection afforded to "fact" compilations by copyright gave little cause

for concern on the part of proprietors of multi-volumed printed bibliographic records, which did not lend themselves to any kind of use or reuse that interfered with the proprietor's control over the economic value of the published works. This may no longer be the case. Data bases, including the machine-readable bibliographic data bases produced by the agencies surveyed in this study, exist in computerized form which may be searched and copied via local or remote equipment. Some systems provide the facilities whereby data bases can be modified or expanded by contributors other than the agency that produced the original data and they can be exploited by end users in ways the originators of the data base might not sanction. Protection of data bases in this form presents different problems for those asserting proprietary rights.

Certain distinct attributes of machine-readable bibliographic records exist that affect their susceptibility to legal control. Records may be created by national library agencies as well as by regional or local agencies that are formally or informally affiliated with the national agencies. They may be created by not-for-profit agencies and intended to facilitate the missions of those agencies, which include sharing the information as broadly as is feasible. Records in the systems contain nearly pure data. Whatever the format of the record, and however it is modified by other agencies, the contents of individual records are created according to rules and criteria established to make the specific factual information in that record accessible by application of computer retrieval techniques. At the present time, national bibliographic agencies differ substantially in their concern over unauthorized reproduction and distribution of their records; for example, a significant number do not claim copyright protection, nor are restrictive clauses in their exchange agreements universally applied.

The drawbacks to reliance on copyright as a basis for international protection for bibliographic records in machine-readable form which are developed, contributed to, modified, and shared internationally are many. While international conventions---primarily the Berne Convention and the Universal Copyright Convention---bind virtually all the major nations currently concerned with developing and sharing bibliographic data to respect each other's copyright laws by providing reciprocal treatment, the national copyright laws themselves are not uniform. Copyright law in the United States, for example, does not permit federal government agencies to claim copyright in their publications, even though some federal agencies may express interest in obtaining such protection. While United States law is unique in this respect, the Library of Congress contains the largest collection of bibliographic records of any of the various national agencies which responded to this survey, and these records cannot be protected by copyright (26).

Even with regard to those nations whose copyright laws apply to works published or sponsored by public agencies, the amount of protection provided for the contents of bibliographic data systems is highly speculative. Individual bibliographic records---containing pieces of information about a certain work or author---are about as close to purely factual, and therefore uncopyrightable, works as one is likely to find. The fact that one nation's

system---or an agency contributing records to it---may organize the data in its individual records in a slightly different fashion than does another, provides little, if any, additional basis for asserting copyright in the individual records of factual information. A system may be susceptible to copyright insofar as the individual records are organized systematically, and copyright may protect against the unauthorized replication of substantial segments of the records in the system because then the copyrightable element of a compilation---the organization of the records inter se---has been copied. In addition, not all national bibliographic agencies claim copyright protection for the systems of records they produce.

The concerns of the producers of bibliographic data appear to be with determining whether or not, and on what terms, access to other users should be granted, and what controls on copying, varying levels of modification, and redistribution of records acquired as a result of that access should be permitted. The concern, expressed by some agencies which modify or contribute records, about asserting proprietary rights in records as modified or contributed is really another aspect of seeking to control access and use via control over copying or redistribution of data to third parties. It is our opinion that none of these concerns are well-suited to be controlled by assertion of copyright in the machine-readable data bases produced by national bibliographic agencies, especially through reference to existing copyright laws.

In the first instance, copyright was never designed to function as a body of law to govern relationships of parties seeking to control distribution of works to a limited audience. Rather, even in the early days of printing, copyright was a tool to control unauthorized distribution of works intended for broad dissemination that would immediately be beyond the control of a work's publisher. Copyright was necessary to control dissemination of works of authorship because agreements among parties were not sufficient.

Most issues concerning reuse of information acquired by searching one agency's bibliographic records cannot be satisfactorily resolved by sole reliance on copyright law. It would be possible, for example, for the authorized searcher of such records to "repackage" or "resell" the information obtained from a search to yet another. But the actual practices of the bibliographic record users studied here (i.e., national bibliographic agencies) do not seem to be of a sort that would constitute copyright violations, because they do not reproduce and re-exploit copyrightable elements of the MARC data bases. (This may change, however, with increasing use of on-line systems and satellite transmission across national boundaries.)

It is apparently common practice, as revealed by the survey results, for national bibliographic agencies to modify the individual records they receive from other agencies---either by deleting portions, adding information, or restructuring the data in the record. Such "reformatting" of individual records is probably not a copyright violation, nor does it give the agency a copyright interest in the record as modified. Copyright provides no protection for individual records contained within bibliographic data collections, and the "format" of such individual records, which are presumably arranged solely to present the information in a useful manner---is not truly a copyrightable element of a fact compilation.

The survey also indicates that half the responding national agencies, including all those with highly developed systems, obtain records from other agencies, and most of those distribute these records to yet other agencies. The contributions of individual records to a comprehensive system gives the contributor no real copyright interest in the entire system. As indicated above, there is probably not any copyrightable element in an individual record. The copyrightable element in a fact compilation is the structural relationship---the systematization---of the collection of individual records. Agencies contributing individual records make no real creative contribution to the overall structure of a pre-existing system.

Finally, it does not appear that the actual "resale" by a national bibliographic agency of a large segment of contiguous records in a machine-readable bibliographic data base---the one type of unauthorized use which would most likely constitute a copyright violation because it replicates the system's organization---is the type of use about which system proprietors and users are really concerned. There is little likelihood that an authorized user (one of the national agencies which participates in the national or international sharing of records) would "bleed off" substantial components of a system and try to remarket them. However, if this were a problem, or were it to become a practice which agencies could not control by simple agreement (27), then the existence of copyright might give a producing agency an enforceable copyright interest in its system.

Moreover, one agency's act of repackaging data obtained from such an authorized use of another's data collection may not be a copyright violation if the information is restructured for a different use. This conclusion is suggested by a recent case in the United States, in which a court held that it was not a copyright violation for a party to search the New York Times Index, a well-known reference compilation, in order to create a new directory indexing names cited in the Times Index (28).

This is not to say that national bibliographic agencies responsible for the creation and dissemination of bibliographic records in machine-readable form, or the various contributors of data to such systems, can have no control over the information compiled in the system. It is only to say that copyright law seems not to be necessary to provide them with the control they seek.

Those who create and make contributions of value to data compilations such as MARC-type data bases do have the threshhold power to grant or withhold access to other agencies or users of the records they have compiled. The information they collect and input is proprietary in the sense that they have physical possession of the data base they have developed. According to the value their contribution has to others with whom they may wish to share those records, creators and proprietors of bibliographic compilations may bargain concerning the terms on which they will make their records available to others.

They may, for example, seek reciprocal access to the records of other systems in return for access to the records they create. They may seek to charge a user fee; whether it is called a license or royalty payment or

given another name is of no consequence. Such fees might be charged based on time spent searching a particular data base or on the number of records retrieved in any search. They may also seek to charge additional fees to any user who grants access to yet other parties, and assess some type of charge, or demand some type of service, for that access. The assertion of copyright is not necessary to make such agreements enforceable. Lawful possession of the physical medium is sufficient control to enable agencies to enter such agreements and to discontinue the relationships if they choose if the other parties refuse to comply with their responsibilities.

It is not here contended that use and access to any and all machine-stored information can be adequately limited by such arrangements in such a way that the economic contributions of creators and proprietors can be fully protected. But it is contended that such contractual arrangements, based purely on the agreement of parties acting in good faith to set the terms on which they will deal with each other, may be appropriate to create adequate legal relationships among national bibliographic agencies, both now and in the foreseeable future.

Conclusions

This study was undertaken with an assumption that its primary focus would be copyright and its applicability to the control of the international exchange of bibliographic records in machine-readable form. During the course of the study we found that this focus was too narrow. Copyright, we found, is not the only uncertainty which exists regarding the international exchange of bibliographic records. Neither is the question of "record ownership" which has been debated substantially in the U.S., particularly regarding the sharing of bibliographic data by major bibliographic utilities. Rather, we found the greatest uncertainty to be a lack of appreciation of the economic realities involved in the production and exchange of bibliographic records in machine-readable form. It is our perception, based on our interviews, survey responses, and reading of the literature that the exchange of bibliographic data in machine-readable form has developed as an outgrowth of librarians' traditional professional responsibility and preference for the development of mechanisms to support the "free flow" (29) and exchange of information. This flow of information, as facilitated by computer technology, is an increasingly international business which is actively promoted by organizations and programs such as IFLA and Universal Bibliographic Control.

This exchange of data must, we feel, be encouraged to continue. Yet financial pressures on producing agencies will continue to increase as demand increases and as more agencies develop the capabilities for providing on-line access.

It may be inevitable that national agencies will turn increasingly to user charges as a means of recovering some of the costs of production and/or distribution. Alternatively, national agencies may seek to restrict access to their records if they find this warranted by increasing costs.

As we noted above, copyright was at first the primary focus of this study. Yet we have found that only a small number of agencies seek copyright protection for the systems of bibliographic records which they produce. While this may be due partly to a lack of clarity within various countries concerning copyright's applicability to bibliographic records, or even to the substantial variation among different countries of their own copyright laws, we have some reason to question whether copyright will ever be clarified sufficiently or in such a manner as to answer completely questions which arise concerning the international exchange of bibliographic data.

This is not to say that copyright is totally irrelevant; far from it. We strongly urge organizations such as IFLA to aggressively support programs such as UNESCO's which seek to clarify guidelines for copyright's treatment of bibliographic records. However, we recommend that continued reliance also be placed on bilateral exchange agreements to govern bibliographic data exchange. An excellent beginning has already been made at developing such exchange agreements. However, we have found that it is unrealistic to think that a universal, standardized exchange agreement will exist which can be entered into automatically by exchange partners. This statement is based on the following factors:

1. Different agencies will have different reasons for entering into exchange agreements and will also differ as to the interests they wish to protect.

2. Agencies will differ as to the degree they must (or wish to) recover costs of database production and/or distribution.

3. Agencies will differ substantially as to the ratio of the total number of records distributed to the total number of records received and/or used.

4. Agencies will differ as to the types of uses they wish to allow of the data which they supply.

5. National bibliographic agencies will differ as to the types of agencies to which they will be willing to release their records.

These factors should not be considered to be barriers to exchange, but they could form the basis for the development of components of exchange agreements in which the rights and responsibilities of exchange partners are clearly spelled out.

We noted above that a major uncertainty in this situation is a lack of appreciation or understanding of the economic realities of international data exchange. This is not a criticism of the parties involved since the sharing of information is a strongly-valued professional goal of librarians worldwide. Yet librarians are becoming increasingly aware of the economic value of bibliographic databawes. We feel that the value of such data, both

in economic and non-economic terms, would be seriously underestimated if librarians focus too narrowly on the question of ownership of individual records. In our opinion, the value of bibliographic data bases derives not only from the use or modification of individual records but also in the overall availability of entire databases which can be searched and used for a wide variety of purposes.

These issues would be much simplified if bibliographic records were used solely for in-house cataloging purposes. But our study has revealed that, now or in the future, records may also be used as a basis for input to machine-readable data bases which are then redistributed to third parties whose use of such data might eventually compete with the product of the original, originating agency.

Based on our knowledge of copyright issues raised in other areas (e.g. photocopying, off-the-air taping of television or radio broadcasts, pirating of motion pictures and fabric design, etc.), we feel that it is highly unrealistic to suppose that bibliographic record producers can ever completely control the modification or redistribution of the records they supply to other agencies, no matter how specific the intentions which might be spelled out by the original exchange partners. Unauthorized duplication and access is bound to occur, even if electronic safeguards (as desired by many survey respondents) are implemented. It is perhaps an unpleasant fact that the only sure way to prevent unauthorized duplication is to refuse to enter into an exchange agreement in the first place. We share the desire of librarians worldwide that this does not occur, since such a situation may seriously hamper the goals of standardized, non-duplicative international bibliographic control.

We believe that an ideal system for governing international exchange would be one which balances the universal availability of bibliographic data with the (varying) economic and non-economic interests of those agencies which produce such data. We have already noted that copyright law is only one of the factors which must be considered for the protection of the moral and economic rights of authors. Other factors which should be balanced in this regard are the increasingly important questions concerning the international transmission, by wire, satellite, microwave, or other means, of numeric and non-numeric data, and also the sharing of data among representatives of developing countries.

The survey responses essentially bear out what we found in our legal analysis and in our personal and telephone interviews: copyright protection is not a complete answer to the question of how best to control exchange and/or use of machine-readable bibliographic records. The concept of bilateral exchange agreements (the approach currently being used by many agencies) is strongly supported. The fact that control over exchange or use is desired even by those agencies which do not currently claim copyright protection may, in fact, be due to both a lack of understanding of copyright as well as to its lack of specific coverage in many countries of computerized data bases. Furthermore, the support for electronic controls is, we feel, evidence that agencies are concerned about the unauthorized use of their records by organizations other than the parties to exchange. Such electronic controls take increased importance when on-line searching of bibliographic

data bases is considered. In practical terms, however, electronic controls (e.g., passwords, restricted access, etc.) cannot be exerted directly since most of the national bibliographic agencies do not themselves provide on-line access. Such electronic controls could become important if it were possible, for example, to restrict the total number of contributed records retrieved from a data base. The ability to do this, however, will vary greatly depending upon the technical capabilities of the organizations with which bibliographic data are exchanged.

The options of control via international consortia, blanket licenses, and compulsory licenses may not have been supported by survey respondents simply because it was not possible in the questionnaire to fully explain how such hypothetical mechanisms might operate. A key component of such mechanisms is that exchange partners relinquish some control over factors such as identification of customers, record use, and/or price-setting. We feel confident in concluding that record producers are somewhat reluctant to relinquish control over re-use, selling, or modification of their records. This is based not only on the survey responses themselves but also on a general reluctance of any producer of intellectual property to relinquish total control over that property, no matter how efficient the licensing or distribution mechanism might be. As evidence of this we cite the existence in the U.S. of past opposition to compulsory licensing in cable television as well as to the continued operation by many U.S. publishers of their own photocopying and reprint permissions departments despite the existence of such organizations as the Copyright Clearance Center. Furthermore, the effort required to set up universal international licensing arrangements or consortia may be hampered by substantial differences among various countries in their telecommunications, information, and import-export policies.

Given the above situation in which there appears to be a potential conflict between the desire of record producers to control the exchange and use of their records, and the desire of the different organizations to share their data, it is clear that a balance must be developed between the needs of producers and the needs of users. Such a balancing of different national and international interests can only occur if parties with potential differences can communicate and compromise in an organized, cooperative fashion.

Based on these conclusions and our interpretation of the data and opinions collected during this study, we have made the following recommendations to IFLA.

First, IFLA or some other organization should advance the understanding of the economic issues surrounding the international exchange of bibliographic data, possibly through the performance or sponsorship of a cost-benefit study of such relationships among the national bibliographic agencies. At the least, the volume of exchange of bibliographic data should be monitored on a regular basis.

Second, IFLA should promote an understanding of the broader issues surrounding the exchange of data, possibly by developing a consortium of international organizations representing the many organizations involved or interested in data exchange.

Third, IFLA should attempt to determine why its members participate in international data exchange, possibly through an informal polling of its members; such an understanding might help to balance the interests of producers and users of bibliographic data.

Fourth, while copyright is only one of the issues which affects international data exchange, IFLA should assist its members in informing their national governments concerning data exchange.

Fifth, IFLA should establish a working group among its members to explore the future relationships between the copyright of bibliographic data and copyright of the documents which such data describes.

Sixth, IFLA should prepare a document for its member organizations which describes the different issues which might be included in bilateral exchange agreements.

References and Footnotes

1. Hebert, Francoise and Wanda Noel. Copyright and Library Materials for the Handicapped. Prepared for the International Federation of Library Associations and Institutions. Toronto, Canada: Canadian National Institute for the Blind, January 1981.

2. Keplinger, Michael S. "Copyright and Information Technology." Annual Review of Information Science and Technology, Vol. 15, pp. 3-33. Edited by Martha E. Williams. White Plains, New York: Knowledge Industry Publications, 1980.

3. Saltman, Roy G. Computer Science and Technology: Copyright in Computer-Readable Works: Policy Impacts of Technological Change. Washington, D.C.: National Bureau of Standards, October 1977.

4. Squires, Jeffrey. "Copyright and Compilations in the Computer Era: Old Wine in New Bottles." Bulletin of the Copyright Society of the U.S.A. 24:1:18-46 (October 1976).

5. Webster, Duane E. and Lenore S. Maruyama. "Ownership and Distribution of Bibliographic Data: Highlights of A Meeting Held by the Library of Congress Network Advisory Committee." Washington, D.C.: Library of Congress, December 1980.

6. Avram, Henriette E. "The Impact of Technology on Legislation Affecting Libraries." IFLA Journal 6 (1980).

7. Avram, H.D. and S.E. McCallum. "Directions in Library Networking." Journal of the American Society for Information Science 31:6:438-444 (November 1980).

8. Carlile, Huntington. "The Diversity Among Legal Structures of Library Networks." In: Networks for Networkers. Edited by Barbara E. Markuson and Blanche Woolls. New York: Neal-Schuman Publishers, 1979.

9. Epstein, H. "Network Technology Today." Journal of the American Society for Information Science 31:6:425-437 (November 1980).

10. Kilgour, Frederick G. "Increased UAP Effected by an On-Line Union Union Catalog." Interlending Review 7:1:20-22 (1979).

11. Robinson, D.M. "Cooperation and Competition Among Library Networks." Journal of the American Society for Information Science 31:6:413-424 (November 1980).

12. Chartrand, Robert Lee and Jane Bortnick. International Information Exchange: A Theme Conference Summary. Report on the White House Conference on Library and Information Services: Pre-Conference Meetings on Special Themes. July 31, 1979. Washington, D.C.: National Commission on Libraries and Information Science, October 1979.

13. Elrod, J. McRee. "Universal Availability of Bibliographic Records." IFLA Journal 4:4:347-350 (1978).

14. Gotlieb, Allan, Chalres Dalfen, and Kenneth Katz. "The Transborder Transfer of Information by Communications and Computer Systems: Issues and Approaches to Guiding Principles." American Journal of International Law 68:227-257 (1974).

15. IFLA International Office for UBC. "The International Congress on National Bibliographies, Paris, 12-17 September 1977: Report and Recommendations." IFLA Journal 4:1:10-16 (1978).

16. International Access to MARC Records: A Summary Report with Recommended Text for a Bilateral Agreement for the International Exchange of MARC Records. IFLA International Office for UBC Occasional Papers, No. 7. London: IFLA International Office for UBC, 1980.

17. Line, Maurice. "Universal Availability of Publications: Progress and Development." IFLA Journal 4:4:345-346 (1978).

18. Brandhorst, Ted and Martha Williams. "Machine-Readable Data Bases: Copyright Status." Bulletin of the American Society for Information Science 4:4:31 (April 1978).

19. Braunstein, Yale M. et al. Economics of Property Rights As Applied to Computer Software and Data Bases. Report prepared for the National Commission on New Technological Uses of Copyrighted Works (CONTU). New York: New York University, June 1977.

20. Massil, S. Resource Sharing for National Bibliographic Services. Report of the International Congress on National Bibliographies, Paris, September 12-15, 1977. Paris: Unesco, 1977.

21. Wells, A. J. "The International MARC Network: A Study for An International Bibliographic Data Network." The IFLA Office for UBC Occasional Papers, No. 3. London: IFLA Office for UBC, 1977.

22. World Intellectual Property Organization. Model Provisions on the Protection of Computer Software. Report No. 64. Geneva, Switzerland: WIPO, 1978.

23. McDonald, Dennis D., Rodger, Eleanor J., and Squires, Jeffrey L. The IFLA International Study of Copyright of Bibliographic Records in Machine-Readable Form: Final Report. Rockville, Maryland: King Research, Inc., 1982.

24. Czechoslovakia; Bulgaria; Austria; Canada; Denmark; Finland; France; Italy; Japan; Korea; Malaysia; Nigeria; Philippines; Republic of Singapore; South Africa; Spain; Sweden; Taiwan; Thailand; United Kingdom; United States.

25. These individuals were interviewed: Henriette Avram, Library of Congress; Toni Carbo Bearman, National Commission on Libraries and Information Science; Bill Bucanan, Carrollton Press; Richard M. Dougherty, University of Michigan; Warren J. Haas, Council on Library Resources; Joanne Harrar, University of Maryland; Madeline Henderson, Consultant, Bethesda, Md.; Lee Jones, Council on Library Resources; Michael S. Keplinger, U.S. Copyright Office; Emery Koltay, R.R. Bowker Company; Joseph Kuney, Informatics, Inc.; Susan K. Martin, Johns Hopkins University; Sandra K. Paul, SKP Associates; Carol Risher, Association of American Publishers; Edward Shaw, Research Libraries Group, Inc.; Robert Wedgeworth, American Library Association; Robert Willard, Information Industry Association; James Woods, Chemical Abstracts Service; Peter Young, Library of Congress; Roderick Duschesne, National Library of Canada.

26. Both the Berne Convention and the Universal Copyright Convention ("UCC"), to which most survey respondents are signatories (the notable exception being the United States, which is a signatory of the UCC only), appear to recognize that copyright may exist for works regardless of the medium in which the works are recorded. Significantly, these international conventions do little to create substantive copyright law with respect to what works are protectable; rather, they recognize reciprocal treatment among member nations.

27. For example, via current exchange agreements' inclusion of a prohibition against the publication by one agency of another agency's national bibliography.

28. New York Times Co. v. Roxbury Data Interface, Inc., 434 F. Supp. 217 (D.N.J. 1977).

29. We note here that "free flow" can take two meanings, the first being "free of cost" and the second being "free of impediments other than costs".

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Implications of Transborder Data Flows to Library Networks

by

Hugh P. DONAGHUE

Vice President, Government Programs
and International Trade Relations

Control Data Corporation

Washington, D.C.

U.S.A.

Introduction

Transborder data flow (TDF)* has become a topic of serious discussion and concern among the governments of the industrialized world, developing countries, international organizations, and many multinational corporations. These discussions have taken many forms: that of protection of the privacy of individuals, protection of non-personal corporate data, threats to national sovereignty, non-tariff barriers, technology transfer, data havens, etc. Although the issue has been of great concern to the business community, it has certain implications that should also be of concern to the library community.

Concerned about the privacy rights of their citizens, many European countries have either adopted or have under consideration laws that will restrict the flow of personal data across borders. Commissions or data authorities have been established that would control such data flows where abuse of individual privacy might occur. The European view has been accurately expressed by Mr. Louis Joinet of the French Ministry of Justice when he said, "The purpose of privacy law is to limit the free flow of information in order to provide for an equally important human right."

In the United States there is the Privacy Act of 1974, which allows a private citizen to access and correct files maintained on him by the public sector. In addition, many companies in the private sector have voluntarily adopted policies that would guarantee similar protection to its employees.

At the same time they were developing national legislation to protect personal data, several European governments began inquiries into many other aspects of the computerization of society, including the flow of non-personal data across national borders. Recognizing the potential impact on society with the merging of computing and telecommunications technologies, several European intellectuals raised many questions. These included questions about economic well-being, employment, national sovereignty, and even the vulnerability of a computerized society.

* Transborder Data Flows has been generally defined as the electronic movement of data across a border for the storage and/or processing by a computer. It, therefore, involves communications from a terminal to a computer, computer to computer, and computer to a terminal.

It is impossible to trace the inquiries into these issues by each government, but the actions of two governments -- France and Brazil -- illustrate the general trend in thinking on these subjects by both a developed and developing country.

France

On December 20, 1976, the President of France, Valery Giscard D'Estaing, initiated a study on the computerization of society. In a letter to Mr. Simon Nora, Inspector General of France, he requested that an initial study be prepared as an outline and guide for a commission that would be established later.

On January 20, 1978, Simon Nora responded to the President with what is known as the Nora-Minc report, entitled "Computerization and the Crisis in France."

The report focussed on rapidly changing technology. The authors observed that until recently, data processing was expensive, low in performance, and esoteric, and thus was cloistered in a small number of firms and functions: it remained the elitist property of the great and powerful. Tomorrow, it will belong to the masses, irrigating society as electricity does. Two kinds of progress brought about this change. Once, there were only giant computers. Now there are countless small, powerful, affordable machines. They are no longer isolated, but are linked through networks.

Because of this revolution, the authors suggested that the French government must do everything possible to improve French chances in a test of strength. Where some of the contestants are beyond her jurisdiction, the government must try to set the rules of the "telematique"* game that is to be played on, or over, her soil -- in a word, to control. In other instances, where national contestants are unequally matched, the government must come to the aid of the underdog, i.e. regulate.

Their recommendations were accepted by the French government, and a commission was established under Alain J. Madec, Chairman, Commission on Transborder Data Flows. His report to the government of France has now been completed, and an English version will be

* "Telematique" was a word invented by Nora to signify jointly telecommunications and computing.

available shortly. However, at a meeting at the Organization for Economic Cooperation and Development (OECD) held in October 1980, Madec revealed some of the thinking of his Commission with regard to issues raised by transborder data flows. He told the OECD conference that:

> "International exchanges of information concern an asset of universal value which can generate wealth or power for those who hold it. Oddly enough though, these flows are largely untouched by the traditional rules governing trade in products: they seldom appear in the accounts of those concerned and, where made between related bodies, are rarely invoiced at their 'transfer price'. Neither are they recorded by the customs, and their very volume often remains unknown to the authorities."

> "Consequently, the free circulation of data implies far more than the concept of free trade, providing opportunities, without any possibility of control, for fraud, espionage, dumping and profit flight. Owing to lack of adequate means of measurement, moreover, the impact of information flows remains distinctly underestimated."

Indeed Madec's observations coincide with many other experts on these issues. Cooperative efforts are underway in the OECD and other organizations to gain a better understanding of the implications of TDF so that the free flow of data may be preserved.

Other countries have different perceptions of TDF and see them as a distinct threat to their societies, and therefore they should be controlled. Brazil represents some of that thinking.

Brazil

The Brazilian view of transborder data flows can best be described by a speech entitled "The Brazilian Position Regarding Transborder Data Flow" given by Joubert de Oliveira Brizida, Executive-Secretary of the Special Secretariat of Informatics, at the IV Latin American Seminar on Data Communication in October 1980. In his speech he stated that TDF

> "denotes the transference of information of any

kind -- technical, economical, cultural, across borders of a country."

He added:

> "Among the best known examples of transborder data flow, from the economic point of view, are: technology transfers, import and export of computer programs, interactive data bases, consultation, data flow and real time operational or administrative control of companies, teleprocessing of data and digital data communications."

In conclusion, he remarked that:

> "In the future informatics societies such resources will tend to constitute a basic indicator of economic power and of national identity. Lack of such resources can generate the same dependence as the one we experience today with oil supply. Thus, all official activities must be directed at maximizing Brazilian information resources. Therefore, TDF is and will continue to be submitted to 'political values' that subordinate it to these objectives."

The concerns expressed by Brizida in his speech reflect the views of many Brazilian government officials, as well as many leaders of the lesser developed countries (LDCs). In Brazil these concerns have led to the development of a "gateway" concept for channeling data in and out of Brazil. It calls for the establishment of a switching center through which all international data traffic would flow. At this point there is no indication that the Brazilians would impose restrictions upon the flow of data. However, the opportunity for restricting such flows through the switch is apparent. Further, the center could provide the means of taxing or tariffing the data as it moves through the switch. This development by the Brazilians is being closely watched by many other LDCs, and it is referred to as the Brazilian model.

Corporate Concerns

Many multinationals have remained concerned about the implications of TDF as it affects their international operations. In the December 1979 issue of Financial Executive, some of those concerns were expressed in an article entitled "Handling Transborder

Data Flow -- A Global Concern" by Royal Parker, Director-Financial Services, Anchor Hocking Corporation. They included:

> Government inspection of all data which crosses national borders, to determine compliance with national laws on personal or corporate information and data content.
>
> National laws for the protection of privacy, which may represent another step of government interference in all businesses.
>
> Added administrative expenses which would result from barriers to trade, such as the requirement to file for permits to maintain personal files or to send them outside the country of origin.
>
> Tariffs, which may be applied to incoming information and data.
>
> Postal, Telephone, and Telegraph Company (PTT) rates based on volume rather than time, which will significantly increase the cost of transmission of data.
>
> Government subsidization of PTTs -- which may establish their own data processing network services to enhance national revenues and local data processing industry -- offer potentially unfair competition to multinationals.
>
> Additional difficulties for a multinational corporation operating from country to country, because of varying data processing and personal protection laws.
>
> Multinational companies' (MNCs) possible establishment of local data processing operations, the possibility of delays in data transmission, the cost of possible tariffs, and government interference.

Today, two and a half years later, those concerns are still valid. As many multinational corporations look at their long range plans, TDF issues are beginning to play a greater role in the decision process. It is conceivable that TDF restrictions may become as important a factor in foreign investment as market

considerations, tax benefits and labor supply are today. Multinational corporations may also have to prepare to operate in some countries with less data than they currently do.

The International Library Community

As international library networks become a reality, the library community will have to address some of the problems currently facing the business community. Two economic threats could make such networks too costly for libraries to afford unless government exemptions can be obtained. These are: tariffs which may be applied to incoming information and data; and transmission rates based on volume rather than time. Several countries, such as Brazil, are planning communications systems whereby international data would flow through a single communications switch. Under the concept that data is a commodity, these countries believe that such international data flows should be tariffed. Indeed, some countries would extend the concept to tariffing data by the type of data being transmitted. In other words, there would be a tariff structure that would differentiate between such kinds of data as technical, administrative, financial, etc.

Over the last few years there have been discussions among the European PTTs concerning transmission rates based on volume rather than time. In promoting the concept of a public switch network, several PTTs have suggested changing the rate base to volume sensitive rates. It is estimated in some instances that this could increase transmission costs to the user by a factor of five to seven. This in turn could affect the economic viability of a library information network.

But, an even greater threat may arise from the tendency of some governments to want to control the content of information transmitted across national borders. As libraries automate, and data bases of all forms are constructed for easy access throughout a network, the question of unrestricted access to such data bases becomes a major issue. Do governments have the right to impose controls and restrictions on access to either commercially available or open and public data bases? Although one's immediate response to such a question would favor the unrestricted right of access, some governments, including the United States, do not necessarily concur.

Recently the U.S. government withdrew its financial support for an international research organization. In justifying the withdrawal of this support, the government cited as one reason, the access by

the institution to the commercially available Lockheed data base. Notwithstanding the first amendment of the U.S. Constitution dealing with freedom of information, isolated incidents such as the one mentioned above are taking place.

An intense debate between the Europeans and the U.S. over some of these issues is currently taking place, and although the U.S. professes to promote the free flow of information, in specific instances it does create impediments to that same free flow.

The international business community has been very concerned over such restrictions. They would welcome the support of other interested parties such as the library community to join in open discussion and dialogue on these issues in order to preclude the closing of national borders to information flows of all types or the control and restrictions of such flows. The sooner such a dialogue can begin, the better the chances are that as we enter into the information age, the freest flow of information will be the primary principle of that era.